

SOUTH



AUSTRALIA

FINDING OF INQUEST

An Inquest taken on behalf of our Sovereign Lady the Queen at Adelaide in the State of South Australia, on the 10th and 11th days of December 2001 and the 5th day of February 2002, before Wayne Cromwell Chivell, a Coroner for the said State, concerning the death of Margaret Joyce Taylor.

I, the said Coroner, find that, Margaret Joyce Taylor aged 56 years, late of 74 Hilliers Road, Reynella, South Australia, died at Flinders Medical Centre, Bedford Park, South Australia on the 10th day of May 2000 as a result of a subarachnoid haemorrhage complicating a berry aneurysm of the right middle cerebral artery. I find that the circumstances of the death were as follows:

1. Introduction

- 1.1. On 10 May 2000, Mrs Taylor collapsed at home. She was intubated and conveyed to Flinders Medical Centre by ambulance, but on arrival she was noted to be unresponsive to pain with fixed pupils and a CT scan revealed an extensive subarachnoid haemorrhage.
- 1.2. In his report, Exhibit C8, Dr Brian Brophy, the Head of Neurosurgery at Flinders Medical Centre, advised me that Mrs Taylor's poor neurologic condition precluded consideration of further investigation or surgical management of the subarachnoid haemorrhage, and tests indicated a likely diagnosis of brain death.
- 1.3. At about 7:55pm that day, Dr Donna Willmot examined Mrs Taylor and found that her heartbeats, respirations and pulse were absent, and her pupils were fixed and dilated. Dr Willmot pronounced life extinct at that time (Exhibit C4).

1.4. Cause of death

A post-mortem examination of the body of the deceased was performed by Dr R A James, Chief Forensic Pathologist, at the Forensic Science Centre on 14 May 2000. Dr James found that the cause of death was ‘subarachnoid haemorrhage complicating berry aneurysm at the origin of the right middle cerebral artery’ (Exhibit C2a, p1). I accept his evidence about that, and find that the cause of death was as he deposed.

1.5. Dr James commented:

‘The death was obviously due to a subarachnoid haemorrhage and the clinical diagnosis was confirmed. The origin of the haemorrhage appears to have been a small aneurysm on the right middle cerebral artery but the rupture of this vessel has largely obliterated the aneurysm. There seems no basis for the suspected earlier whiplash injury. The symptoms extending over a period of approximately one week are presumably related to an earlier leakage from the aneurysm.’

(Exhibit C2a, p4)

1.6. Mrs Taylor had complained of occipital and neck pain since about 3 May 2000, and had consulted various medical practitioners, but none of these had diagnosed a subarachnoid haemorrhage. These practitioners included:

- Dr P J Woodward at the Reynella Medical Centre on 4 May 2000;
- Dr J P Mansfield at the Noarlunga Health Service on 7 May 2000;
- Dr A A Peciulis at the Reynella Medical Centre on 8 May 2000.

1.7. The main issue arising in this inquest is whether Mrs Taylor’s subarachnoid haemorrhage should have been detected at an earlier time.

2. Background

2.1. In his statement, Exhibit C3a, Mrs Taylor’s husband, Mr Chris Taylor, said that his wife was ‘a very healthy person and had no medical problems of significance’. He added:

‘It was always difficult to get Margaret to see a doctor. She did not like them. This stemmed from her childhood.’ (p1)

2.2. On 29 April 2000, Mrs Taylor went shopping with her son John. John was driving in the carpark of the Southgate Shopping Centre when he had to brake suddenly to avoid colliding with a car that was reversing from a parking space. As a result of this

incident, Mrs Taylor told her husband that she thought she may have had whiplash. (Exhibit C3a, p2).

2.3. On Thursday 4 May 2000, Mrs Taylor called out to her husband saying:

‘I am having a stroke, my head hurts.’

(Exhibit C3a, p1)

Mr Taylor made an appointment at the Reynella Medical Centre for that evening.

2.4. At about 8pm that evening, Mrs Taylor consulted Dr Woodward at the Reynella Medical Centre. Dr Woodward’s notes of this consultation are remarkably brief:

‘Aches (L) & (R) temple & neck aches → neck a problem – Panadeine Forte
Nurofen
heat & rest

(Exhibit C5a)

2.5. Dr Woodward told me that these notes indicated to him that his diagnosis was cervical neuralgia (T9). He added:

‘My notes are not a very good indicator of the consultation as it progressed. However my assessment was that the pain arose from her neck.’ (T10)

2.6. Dr Woodward then went on to explain that he has quite an elaborate standard protocol for dealing with patients presenting with such complaints, but only records the results of his investigations if there is an abnormality detected. He even suggested, for example, that he took Mrs Taylor’s blood pressure, and that the fact that he had not recorded the results indicated that she would have had a systolic pressure of about 145, and a diastolic reading of under 90.

2.7. I must say that I find this approach to medical investigation to be less than satisfactory. Just as an illustration, Dr Woodward had no idea what Mrs Taylor’s normal blood pressure was. A quick perusal of the casenotes reveals that her blood pressure was taken by other doctors on occasions, but not since 1996, when her readings varied between 180/100 and 155/90. Both of these readings are abnormally high.

2.8. I have commented repeatedly over the years in other inquests that this approach reveals a general lack of medical professionalism. It also prevents other doctors from

obtaining a longitudinal view of the health or otherwise of the patient by referring back to their medical history. It seems fundamental to me that there is little point in taking a patient's blood pressure, or indeed observing any other symptoms, if the results are not recorded.

- 2.9. In relation to this case in particular, I am not prepared to make a positive finding that Dr Woodward carried out the detailed investigations that he alleges. He admitted in cross examination that he had no recollection of the consultation. Although he asserted that he would have asked Mrs Taylor how long she had the headache for, he has not recorded her reply. Nor did he make any note of the severity of her complaint of pain, or whether she had any history of headaches (T17). These are significant issues which he has failed to address.
- 2.10. On Friday, 5 May 2000 Mrs Taylor's daughter, Jo-Anne, who had received some training, massaged Mrs Taylor's shoulders. That night, Mrs Taylor told her husband that she 'definitely felt better' (Exhibit C3a, p2).
- 2.11. On Sunday, 6 May 2000 Mrs Taylor felt 'even better' during the morning. Her appetite was poor that evening, and at about midnight she vomited.
- 2.12. At about 4:30am on Sunday morning, 7 May 2000, Mr and Mrs Taylor attended at the Noarlunga Health Service where she was seen by Dr Mansfield at about 4:50am. Dr Mansfield's notes in the clinical record (Exhibit C6) are much more informative and detailed than were Dr Woodward's.
- 2.13. The record does not contain any note that Mrs Taylor's pulse, blood pressure, respiratory rate, temperature and oxygen saturation were taken. Dr Mansfield told me that these are routinely taken by the nurse on presentation, and kept on a separate sheet. It would appear that this information has not been incorporated into the record (T32). Again, for the reasons I have already expressed, this is unsatisfactory and should be attended to by the hospital administration. This is important information which should be placed on the record.
- 2.14. Dr Mansfield noted the position and duration of the headache, the fact that Mrs Taylor had seen her local doctor and been prescribed Panadeine Forte, and that the headache had settled after she had seen the doctor but, while brushing her teeth that night, she bent forward and the headache returned and she vomited. Dr Mansfield noted the

absence of a number of signs including photophobia, numbness, and pins and needles (T35).

- 2.15. Dr Mansfield noted tenderness in the area of the cervical spine and a 50% limitation of movement in all directions. Her neurological signs were normal as was a sign known as Koenig's sign which is designed to illicit meningeal irritation (T40).
- 2.16. After these investigations, Dr Mansfield concluded that Mrs Taylor was suffering a 'probable facet joint dysfunction' in the neck, and that there were 'no signs of SAH (subarachnoid haemorrhage)' (Exhibit C6). He explained that he was anxious to exclude this condition because:

'We see a lot of people with headache and the challenge is always to separate the benign headaches from those for which there is an underlying serious cause, I guess particularly in an emergency department. The idea of subarachnoid haemorrhage when someone presents with a headache is always in the back of your mind and is always, I guess, the diagnosis which you must test everything against because of its catastrophic nature.'

(T41)

- 2.17. He described the classical presentation of a subarachnoid haemorrhage as follows:

'... a thunderclap headache or, you know, the worst headache I've ever had, often associated with collapse, severe neck pain and rigidity of the neck and sign of meningism' (irritation of the coverings of the brain or spinal cord whether by infection or haemorrhage). (T42)

- 2.18. Dr Mansfield prescribed intramuscular Morphine with Maxolon with advice to continue with Panadeine Forte, with suggestions to try physiotherapy if the pain did not settle and to return if the treatment failed (T45).
- 2.19. Later on Sunday morning, Mrs Taylor told her husband that she was feeling better, but by Monday night 8 May 2000, she was again complaining of feeling unwell. Mr Taylor took his wife back to the Reynella Medical Centre where she was seen by Dr Peciulis. Dr Peciulis' notes in Exhibit C5a are as follows:

'Bilateral neck pain with 2° (secondary) bilateral headache and nausea. No relief with PF (Panadeine Forte) or Morphine injection.
O/E Tender neck ++ ↓↓ROM (range of movement). Tender occipital tuberosities bilaterally.'

- 2.20. Dr Peciulis diagnosed 'occipital neuralgia'. He said he was not familiar with 'cervical neuralgia', the condition diagnosed by Dr Woodward. He explained:

‘The underlying cause is always the neck strain and the inflammation and muscle spasm that’s affiliated with the neck strain can cause inflammation of the occipital nerve, which exits the skull just near to the occipital tuberosities; hence, palpating that area looking for tenderness.’ (T53)

- 2.21. Dr Peciulis injected Lignocaine, a topical anaesthetic, subcutaneously in the area of the occipital tuberosities. He also prescribed a Voltaren, a non-steroidal anti-inflammatory medication, Ducene which is a muscle relaxant to deal with the muscle spasm, and suggested a review in three days.
- 2.22. Dr Peciulis said that there was nothing in Mrs Taylor’s presentation which would have led him to consider a diagnosis, or a differential diagnosis, of subarachnoid haemorrhage (T56).
- 2.23. On Tuesday morning, 9 May 2000 Mrs Taylor told her husband that she felt ‘a bit better’, although both he and his son were trying to convince her to get a second opinion at Flinders Medical Centre (Exhibit C3a, p4).
- 2.24. On the morning of Wednesday 10 May 2000 Mrs Taylor told her husband that she felt ‘a lot better’. However, later that morning, Mrs Taylor collapsed and was conveyed to Flinders Medical Centre, as I have already described.

3. Standard of treatment received by Mrs Taylor

- 3.1. I received a report from Dr Brophy, as I have already mentioned. Dr Brophy was Head of the Neurosurgery Department at Flinders Medical Centre where Mrs Taylor was admitted after she collapsed.
- 3.2. Dr Brophy explained:

‘Subarachnoid haemorrhage is bleeding into the fluid compartment that surrounds the brain, the so-called subarachnoid space. The fluid in this space is the cerebro-spinal fluid. In an adult subarachnoid haemorrhage is typically due to rupture of a berry aneurysm. Berry aneurysms typically occur at points of branching of the major blood vessels to the brain soon after they enter the intracranial compartment and lie within the subarachnoid space. Aneurysms on the middle cerebral artery constitute 20-25% of cases.

Clinical presentation of subarachnoid haemorrhage is classically apoplectic but in a percentage of cases the clinical presentation may be more subtle with less severe headache. This has sometimes been referred to as a so-called ‘warning leak’. This may occur in up to 30% of patients. Consequently subarachnoid haemorrhage needs to be considered when patients present with atypical headache (e.g. a patient presenting with a

headache who has not suffered from headaches previously) or a persisting headache. Establishment of the diagnosis of subarachnoid haemorrhage is by CT scan which may confirm the presence of subarachnoid blood or by lumbar puncture. Lumbar puncture refers to taking a specimen of cerebro-spinal fluid and examining it for frank blood or for the presence of the products of breakdown of blood.

Surgical management of patients with subarachnoid haemorrhage is relatively straightforward in patients in good condition. At surgery the aneurysm is repaired by placing a clip across the neck of the aneurysm to exclude the weak point from circulation.'

(Exhibit C8, p1-2)

- 3.3. When Dr Brophy gave oral evidence, he agreed that it is possible that Mrs Taylor was having a 'warning leak' from the berry aneurysm at the time she consulted Drs Woodward, Mansfield and Peciulis (T63). He said that the symptoms may vary if there is only a small amount of haemorrhage and then the blood is reabsorbed by the body (T64).
- 3.4. Dr Brophy was not critical of any of the doctors who formed diagnoses of neuralgia and/or facet joint neck pain. He said:

'I think they would be included in a list of diagnoses that I've commonly seen in patients presenting with subarachnoid haemorrhage that may have had a warning leak, or atypical presentation of subarachnoid haemorrhage. There's a long list of diagnoses that may well be entertained in the best of institutions.' (T65)
- 3.5. Indeed, Dr Brophy agreed with Mr Soulio, counsel for Drs Woodward and Peciulis, that even in a tertiary institution, that is a major public hospital, the admitting diagnosis could be incorrect in up to 30% of cases where the patient has a subarachnoid haemorrhage (T75).
- 3.6. Dr Brophy said that Dr Mansfield took a good history from Mrs Taylor and documented a careful examination of her (T78). He was the only one of the three practitioners who even entertained a subarachnoid haemorrhage as a differential diagnosis. Without being critical, Dr Brophy said that it would be his advice that if a doctor entertains subarachnoid haemorrhage as a differential diagnosis, the patient should be referred to a specialist rather than attempting to exclude the condition in the General Practitioner's surgery. In particular, he said that the use of Koenig's test is not enough to rule out such a diagnosis:

‘The only way you can rule out a diagnosis of subarachnoid haemorrhage is to do a lumbar puncture and demonstrate clear CSF (cerebro spinal fluid) in any patient that presents with headache.’ (T69-70)

- 3.7. He said that initially a CT scan would be performed and, if that was negative, a lumbar puncture, and if that gave an equivocal response, a specialist might proceed to a four-vessel angiography (T78).
- 3.8. I also received a statement of Dr David Petchell, exhibited to an affidavit, who is a General Practitioner with experience since 1977. Dr Petchell said that, having regard to the information before Drs Woodward and Peciulis, he would not have entertained a subarachnoid haemorrhage as a differential diagnosis either (Exhibit C9a, pp2,4).
- 3.9. Of course, there is no substitute for clinical experience, and it is difficult for Dr Petchell to put himself in the position of Dr Woodward and, to a lesser extent Dr Peciulis, having regard to the brevity of their notes. However, I accept his evidence on the basis that it is agreed by all concerned that Mrs Taylor’s presentation was atypical of a subarachnoid haemorrhage, and that the possibility that she was having a ‘warning leak’ from the aneurysm is only a suggestion that can be made in retrospect.

4. Conclusion

- 4.1. The cause of Mrs Taylor’s death has been clearly demonstrated at post-mortem by Dr James as a subarachnoid haemorrhage complicating a berry aneurysm of the right middle cerebral artery.
- 4.2. When Mrs Taylor consulted Drs Woodward, Mansfield and Peciulis with severe headache and neck pain, she could have been suffering a ‘warning leak’ from the berry aneurysm which eventually proved lethal.
- 4.3. The notes made by Dr Woodward of his examination and treatment of Mrs Taylor were completely unsatisfactory. I am not prepared to make a positive finding that Dr Woodward conducted an adequate examination or assessment of Mrs Taylor’s condition on the basis of those notes.
- 4.4. Dr Mansfield’s examination and treatment of Mrs Taylor was much more thorough and well documented and he entertained the possibility of a subarachnoid haemorrhage but excluded it.

- 4.5. Dr Peciulis whose notes are slightly more informative than Dr Woodward's, also did not entertain a diagnosis of subarachnoid haemorrhage.
- 4.6. In view of the evidence of Dr Brophy, and having regard to the evidence of Dr Petchell who looked at the matter from the point of view of a General Practitioner, I make no criticism of any of the three medical practitioners on the basis of their failure to diagnose a subarachnoid haemorrhage in Mrs Taylor.

5. Recommendations

- 5.1. Pursuant to Section 25(2) of the Coroner's Act I recommend that General Medical Practitioners who entertain a diagnosis of subarachnoid haemorrhage, even as one of several differential diagnoses, should seek specialist advice rather than seeking to exclude the diagnosis in the surgery, since the condition can present atypically, and can only be excluded by specialist investigative techniques.

Key Words: Subarachnoid Haemorrhage; Medical Treatment; Misdiagnosis

*In witness whereof the said Coroner has hereunto set and subscribed his hand
and Seal the 5th day of February, 2002.*

Coroner